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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,097	10/02/2003	Soo Keun Lee	27427.009.00-US	8395

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MCKENNA LONG & ALDRIDGE LLP

Song K. Jung  
1900 K Street, N.W.  
Washington, DC 20006

EXAMINER

SANTIAGO, MARICELI

ART UNIT PAPER NUMBER

2879

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/676,097

**Applicant(s)**LEE ET AL. **Examiner**

Mariceli Santiago

**Art Unit**

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 13-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9 and 11 is/are rejected.
- 7) ☒ Claim(s) 6, 10 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/03, 12/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

Claims 13-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on December 13, 2005.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Gioia et al. (US 4,457,733).

Regarding claim 1, Gioia discloses an electron gun for a color cathode ray tube comprising a cathode that emits electron beams, a plurality of electrodes arranged from the cathode towards a screen of the cathode ray tube, and a shield cup (18), wherein the shield cup further comprises a central electron beam hole (26), two outer electron beam holes (20, 24) wherein the central and outer beam holes are substantially collinear along a horizontal axis (48), and first, second, third, and fourth magnetic pieces (44's), wherein the first and second magnetic pieces are adjacent to a first outer electron beam hole and on opposite sides of the horizontal axis, and wherein the third and fourth magnetic pieces are adjacent to a second outer electron beam hole and on opposite sides of the horizontal axis (Fig. 1B).

Regarding claim 2, Gioia discloses an electron gun wherein the magnetic pieces have a first and a second end, wherein the first ends are closer to the central electron beam hole than

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the second end, and wherein the first ends are closer to the horizontal axis than the second ends (Fig. 1B).

Regarding claim 3, Gioia discloses an electron gun wherein the magnetic pieces are substantially rectangular (Column 4, lines 4-6).

Regarding claim 4, Gioia discloses an electron gun wherein the magnetic pieces are slanted in the range of 18 to 57 degrees with respect to the horizontal axis (Column 4, lines 12-21).

Regarding claim 5, Gioia discloses an electron gun wherein the magnetic pieces are slanted in the range of 20 to 23 degrees with respect to the horizontal axis.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kwon et al. (US 20010030502).

Regarding claim 1, Kwan discloses an electron gun for a color cathode ray tube comprising a cathode that emits electron beams, a plurality of electrodes arranged from the cathode towards a screen of the cathode ray tube, and a shield cup (70), wherein the shield cup further comprises a central electron beam hole (72), two outer electron beam holes (71, 73) wherein the central and outer beam holes are substantially collinear along a horizontal axis , and first, second, third, and fourth magnetic pieces (81's), wherein the first and second magnetic pieces are adjacent to a first outer electron beam hole and on opposite sides of the horizontal axis, and wherein the third and fourth magnetic pieces are adjacent to a second outer electron beam hole and on opposite sides of the horizontal axis (Figs. 9A-9B).

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Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Umetsu (JP 05-074725 A).

Regarding claim 1, Umetsu discloses an electron gun for a color cathode ray tube comprising a cathode that emits electron beams, a plurality of electrodes arranged from the cathode towards a screen of the cathode ray tube, and a shield cup (C), wherein the shield cup further comprises a central electron beam hole (21G), two outer electron beam holes (21R, 21B) wherein the central and outer beam holes are substantially collinear along a horizontal axis, and first, second, third, and fourth magnetic pieces (22a, 22b), wherein the first and second magnetic pieces (22a) are adjacent to a first outer electron beam hole and on opposite sides of the horizontal axis, and wherein the third and fourth magnetic pieces (22b) are adjacent to a second outer electron beam hole and on opposite sides of the horizontal axis (Fig. 4).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gioia et al. (US 4,457,733).

Regarding claim 7, Gioia fails to disclose the limitations of the magnetic pieces are L-shaped and wherein the magnetic pieces have a first leg between the first and second ends of the magnetic piece and a second leg attached to the first leg at the second end and the second leg extends away from the horizontal axis. Gioia acknowledges the selection of the magnetic shape from a variety of shapes (Column 4, lines 4-6), thus, considered as a matter of design

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choice. Accordingly, at the time the invention was made, it would have been an obvious matter of design engineering to a person of ordinary skill in the art to provide the magnetic pieces having a first leg between the first and second ends of the magnetic piece and a second leg attached to the first leg at the second end and the second leg extending away from the horizontal axis since applicant's claimed L-shape arrangement does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teaching applied. Furthermore, one skilled in the art would reasonable expect applicant's invention to perform equally well with either the magnetic pieces disclosed by Gioia or the claimed L-shaped magnetic piece since both structures perform the same function of prevention unwanted distortion of the electron beams. Accordingly, it would have been an obvious matter of design engineering to modify the device of Gioia to obtain the invention as specified in claim 7.

Regarding claim 8, Gioia discloses an electron gun wherein the magnetic pieces are slanted in the range of 18 to 57 degrees with respect to the horizontal axis (Column 4, lines 12-21).

Regarding claim 9, Gioia discloses an electron gun wherein the magnetic pieces are slanted in the range of 20 to 23 degrees with respect to the horizontal axis.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Umetsu (JP 05-074725 A).

Regarding claim 11, Umetsu fails to disclose the limitations of the magnetic pieces being substantially L-shaped with a first and second leg, wherein the first leg is substantially parallel with the horizontal axis with a first and a second end and the first end is closer to the central electron beam hole, wherein the second leg is attached to the first end of the first leg and extends toward the horizontal axis. At the time the invention was made, it would have been an

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obvious matter of design engineering to a person of ordinary skill in the art to provide the magnetic pieces being substantially L-shaped with a first and second leg, wherein the first leg is substantially parallel with the horizontal axis with a first and a second end and the first end is closer to the central electron beam hole, wherein the second leg is attached to the first end of the first leg and extends toward the horizontal axis since applicant's claimed shape arrangement does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teaching applied. Furthermore, one skilled in the art would reasonable expect applicant's invention to perform equally well with either the magnetic pieces disclosed by Umetsu or the claimed L-shaped magnetic pieces since both structures perform the same function of prevention unwanted distortion of the electron beams. Accordingly, it would have been an obvious matter of design engineering to modify the device of Umetsu to obtain the invention as specified in claim 11.

***Allowable Subject Matter***

Claims 6, 10 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 6, 10 and 12, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claims 6, 10 and 12, and specifically comprising the limitation of the electron beam holes and magnetic pieces are arranged so that  $l'/l$  is greater than or equal to 0.5 and less than or equal to 1.0.

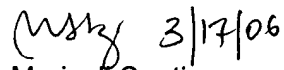
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**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariceli Santiago whose telephone number is (571) 272-2464. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Mariceli Santiago  
Primary Examiner  
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